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10/698,607	10/30/2003	Sivapackia Ganapathiappan	10010060-5	9838

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04/28/2006

HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

EXAMINER

PEZZUTO, HELEN LEE

ART UNIT

PAPER NUMBER

1713

DATE MAILED: 04/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/698,607  
Filing Date: October 30, 2003  
Appellant(s): GANAPATHIAPPAN, SIVAPACKIA

**MAILED**

**APR 28 2006**

**GROUP 1700**

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Gary P. Oakeson  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed February 13, 2006  
appealing from the Office action mailed September 9, 2005.

Art Unit: 1713

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

Art Unit: 1713

5,942,560	Idogawa et al.	08-1999
4,795,794	Winnik et al.	01-1989

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

1. Claims 6, 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Idogawa et al. (US 5,942,560).

US 5,942,560 to Idogawa et al. discloses a method of preparing polymer particles, comprising the step of admixing an aqueous carrier with an unsaturated monomer containing a hydrophobic moiety (i.e. methyl methacrylate) (col. 4, lines 12-23, 61-67; col. 5, lines 28-35) and a carboxyl group-containing vinyl monomer, which falls within the scope of the instant unsaturated monomer containing a convertible moiety in hydrophobic form, in light of the interpretation of appellant's preferred "convertible moiety-containing monomer" embodiment disclosed in the specification (col. 3, line 59 to col. 4, line 6; col. 6, lines 26-40). Specifically, 2-methacryloyloxyethyl succinate ("Acryl Ester SA") was exemplified extensively in US-560 (see Examples 1, 3, 5, 7, 11, 13, 15, 17, 20, Example 5 in particular), resulting in polymer particles having the instant

Art Unit: 1713

size range. US-560 further teaches the inclusion of crosslinking group-containing monomers in the emulsion polymerization reaction (col. 4, lines 19-23; col. 5, lines 1-5, 36-40), meeting the requirement expressed in claim 9.

2. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Idogawa et al (US-560) for the reasons set forth in the preceding paragraph and further in view of Winnik et al (US 4,795,794).

Although the process step of filtering as expressed in claim 7, is considered conventional practice in isolation of reaction product, this is silent in Idogawa et al. (US-560). Furthermore, while US-560 teaches the inclusion of water-soluble dyes to form colored polymer particles, the reference does not expressly exemplify the instant polymerizable dye monomer expressed in claim 8. Analogous US 4,795,794 to Winnik et al. discloses a dispersion polymerization process of preparing colored polymer particles derived from polymerizable dye monomers as presently claimed. US-794 further discloses isolation of the resultant colored polymer particles by filtration (col. 4, lines 32-36). Accordingly, in light of the analogous endeavor of Idogawa et al. and Winnik et al. (i.e. the preparation of colored polymer particles via analogous heterogeneous polymerization processes), it would have been

Art Unit: 1713

obvious to one having ordinary skill in the art to employ a polymerizable dye monomer as taught in Winnik et al. in the process of Idogawa et al., motivated by the reasonable expectation of achieving enhanced homogeneous distribution and immobilization of the dye moiety throughout the colored polymer particles matrix as taught.

3. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Idogawa et al (US-560) for the reasons set forth in the preceding paragraphs above and further in view of the following remarks.

While Idogawa et al. discloses and exemplifies appellant's unsaturated monomer containing a convertible moiety in hydrophobic form (i.e. 2-methacryloyloxyethyl succinate ("Acryl Ester SA")), the reference is silent regarding the recited step of converting the convertible moiety to a hydrophilic form. The reference does, however, disclose the inclusion of pH controller within the scope of the appellant's converting agents defined in the specification (i.e. organic and inorganic bases) in the resultant ink composition (col. 8, lines 35-42). This teaching embraces appellant's method of converting the convertible moiety to a hydrophilic form as interpreted in light of appellant's disclosure. Accordingly, one having ordinary skill in the art would have readily envisaged the use of pH

Art Unit: 1713

controller as taught, which would result in converting the hydrophobic moiety to a hydrophilic form as claimed.

**(10) Response to Argument**

Appellant's arguments filed in the Brief on 2/13/06 have been fully considered but are not found persuasive. The focus of Appellant's argument lies in the vinyl monomer having an acid/carboxyl functional group taught in Idogawa et al. differs from the instant unsaturated monomer containing a convertible moiety in hydrophobic form. This is not compelling as prior art discloses and exemplifies the same methacryloyoxyethyl succinate monomer ("Acryl Ester SA") in the context of emulsion polymerization, as presently disclosed and exemplified as the unsaturated monomer containing a convertible moiety in hydrophobic form. The moieties at issue is expected to be "convertible" in prior art composition, as in appellant's upon the use of converting agent (i.e. pH controller) as taught, because identical monomer is utilized. The word hydrophilic and hydrophobic used by applicant and patentees appear to be a matter of semantics. The function or property of the monomer and the resulting polymer particles remains the same because the same monomer is used in the same emulsion polymerization process. The meaning of appellant's "convertible" and "hydrophobic" was interpreted in light of appellant's

Art Unit: 1713

specification. Furthermore, Idogawa et al. clearly suggested the employment of pH controllers, inclusive of various basic compounds (col. 8, lines 38-42). Hence, one skilled in the art would readily envisaged using any of the basic pH controllers as taught, inherently resulting in the step of converting the convertible moiety to a hydrophilic form after polymer particle formation, as expressed in claim 24. As interpreted in light of applicant's disclosure, the converting step in claim 24 is accomplished by converting the acid group to anionic salt form by adjusting the pH of the solution to a basic range ( $\text{pH} > 7$ ). The step of adjusting solution pH using pH controllers as taught is obvious and conventional practice. To increase solution pH, one would simply use the basic compound disclosed in the reference. Such practice and not unusual and/or unexpected in the context of preparing polymer particles. Finally, regarding claims 7-8, the examiner remains of the position that Idogawa and Winnik references are properly combined as they are clearly analogous art and within the filed of appellant's endeavor. Accordingly, the examiner's position is maintained.

**(11) Related Proceeding(s) Appendix**

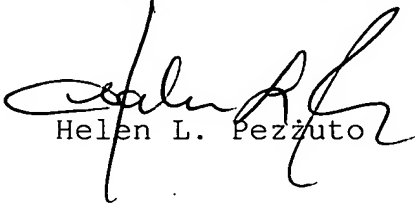
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.



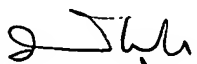
Art Unit: 1713

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
Helen L. Pezzuto

Conferees:

David Wu   
James Seidleck 